



State of Utah

Department of
Environmental Quality

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DIVISION OF AIR QUALITY
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DAQE -AN0408013A-02

September 23, 2004

Mike Dalley
Staker and Parson Companies
P.O. Box 27598
Salt Lake City, Utah 84127-0598

Dear Mr. Dalley:

Re: Approval Order: Administrative Change to Approval Orders DAQE-485-01 and DAQE-569-01
For Corrected Asphalt Mix Temperature and Established Stack Testing Limitations for PM₁₀,
SO₂, NO_x and CO
Project Code: N0408-013

The attached document is the Approval Order for the above-referenced project.

Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Jon Black. He may be reached at (801) 536-4047.

Sincerely,

Richard W. Sprott, Executive Secretary
Utah Air Quality Board

RWS:JB:re

cc: Salt Lake Valley Health Department
Mike Owens, EPA Region VIII

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

APPROVAL ORDER: ADMINISTRATIVE CHANGE TO APPROVAL ORDERS DAQE-485-01 AND DAQE-569-01 FOR CORRECTED ASPHALT MIX TEMPERATURE AND ESTABLISHED STACK TESTING LIMITATIONS FOR PM₁₀, SO₂, NO_x AND CO

**Prepared By: Jon Black, Engineer
(801) 536-4047
Email: Jblack@Utah.gov**

APPROVAL ORDER NUMBER

DAQE-AN0408013-02

Date: September 23, 2004

Staker and Parson Companies

**Source Contact
Mike Dalley
Phone: (801) 298-7500**

**Richard W. Sprott
Executive Secretary
Utah Air Quality Board**

Abstract

Staker and Parson Companies submitted a Notice of Intent for an Administrative Change and to include the established stack testing limitations for NO_x, CO, and SO₂, to their current Approval Orders (AO) DAQE-485-01 and DAQE-569-01¹ for the Beck Street North Asphalt Plant in Salt Lake County. The proposed change would restate that the asphalt mix temperature shall not exceed 375 degrees Fahrenheit and add the appropriate stack testing emission limitations for the asphalt plant since the stack testing has now been completed. Salt Lake County is a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for PM₁₀ and SO₂, and is a Maintenance area for CO and Ozone. New Source Performance Standards (NSPS) Subpart I (Standards of Performance for Hot Mix Asphalt Facilities) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) apply to this facility. National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Available Control Technology (MACT) regulations do not apply to this source. Title V of the 1990 Clean Air Act applies to this source. There will be no emission change due to this Amendment. The controlled allowable emissions, in tons per year, will remain as follows: PM₁₀ 54.22 , NO_x 87.65, SO₂ 92.45, CO 93.47, VOC 41.20, Combined Total HAPs 4.65.

The Notice of Intent (NOI) for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an Approval Order (AO) by the Executive Secretary of the Utah Air Quality Board.

There is no public comment period required.

General Conditions:

1. This Approval Order AO applies to the following company:

Site Office

Staker & Parson Companies
2080 North Beck Street
Salt Lake City, Utah

Phone Number (801) 298-7500
Fax Number (801) 295-7440

Corporate Office Location

Staker & Parson Companies
P.O. Box 27598
Salt Lake City, Utah 84127-0598

The equipment listed in this AO shall be operated at the following location:

2080 North Beck Street, North Salt Lake

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,518.0 kilometers Northing, 422.5 kilometers Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307) and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.

¹ Approval Order DAQE-AN0408013-02, which was issued on November 20, 2002, left unmentioned that it replaces two approval orders: DAQE-485-01 and DAQE-569-01. DAQE-AN0408013-02 is reissued as DAQE-AN0408013A-02 with the correction made in Condition # 8.

3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.
4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401-1.
5. All records referenced in this AO or in applicable NSPS standards, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Records shall be kept for the following minimum periods:
 - A. Used oil consumption Three years
 - B. Emission inventories Five years from the due date of each emission statement or until the next inventory is due, whichever is longer.
 - C. All other records Two years
6. Staker & Parson Companies shall operate the asphalt plant and shall conduct its operations of the aggregate and asphalt production facility in accordance with the terms and conditions of this AO, which was written pursuant to Staker & Parson Companies Notice of Intent (NOI) submitted to the Division of Air Quality (DAQ) on April 30, 2002, and additional information submitted to the DAQ on August 19, 2002.
7. Regardless of any inconsistency between conditions of this AO and Section IX, Part H, and Subparts 2.b.uu for Staker Paving and Construction Company of Section IX, Part H (Emission Limitations) of the SIP, this AO shall take precedence as provided by R307-305-2. The language of Section IX, Part H, 2.a and Section IX, Part H, 2.b.uu have been incorporated into this AO.
8. Approval Order DAQE-AN0408013A-02 shall replace AO DAQE-AN0408013-02, dated November 20, 2002, AO (DAQE-485-01) dated June 22, 2001, and AO (DAQE-569-01) dated July 25,2001.
9. The approved installations shall consist of the following equipment or equivalent*:
 - A. One double barrel counter-flow asphalt plant and baghouse, 700 ton per hour (tph)
 - B. Primary Impact Crusher, horizontal shaft (9209), Model APSE-1313-QM, S/N-APS1313 302774, 1985*
 - C. Vibrating Scalping Grizzly, 5' X 16' (9311), Model VX14, S/N, (NA) 1986*
 - D. Vibrating Feeder, 52" X 16' (9312), Model VL-9, S/N, 1986*
 - E. Secondary Impact Crusher (9211), Model 60, S/N 60B4409 78, 1983*
 - F. Universal Jaw Crusher, S/N 546-PGR-3042, with one 100 kW diesel engine*
 - G. Screen, (93691), 6' x 20'
 - H. Screen (93680), 6' x 20'
 - I. Drive over, (651014)
 - J. Stacker, (91754), 120'

- K. Vibrating Screen Plant (9309), Model 6' X 20', S/N 126743F0384, 1984*
- L. Vibrating Screen Plant (9313), Model 6' X 20', S/N, 1986*
- M. Vibrating Screen Plant (9319), Model 6' X 20', S/N 34-L-0488, 1989*
- N. Aggregate Wash Plant, Model 6' X 20', S/N FSG-6203-32, 1990*
- O. Grizzly Feeder, 42' X 20', (9302)
- P. Belt Loader w/400 kW diesel engine, (91795)
- Q. Jaw Crusher w/400 kW diesel engine, 32" x 40", S/N 10207*
- R. Jaw Crusher, Model 5442JT Jaw Plant, S/N 896, 1993*
- S. One Cone Crusher (400 tph)
- T. Miscellaneous conveyors, earthmoving equipment, oil storage tanks, etc..

* Equivalency shall be determined by the Executive Secretary.

10. The asphalt plant baghouse shall control process streams from the drum mixer. All exhaust air from the drum mixer shall be routed through the baghouse before being vented to the atmosphere.
11. The following asphalt plant operating parameters shall be maintained within the indicated ranges:
 - A. Asphalt Plant Baghouse
 - 1) The pressure drop shall be equal to or larger than 2.0 inches of water column
 - 2) The asphalt mix temperature shall not exceed 375 degrees Fahrenheit

They shall be monitored with equipment located such that an inspector/operator can safely read the output any time. The readings shall be accurate to within the following range:

- B. Pressure drop, 0.5 inches of water column
- C. Asphalt mix temperature – 10 degrees Fahrenheit

All instruments shall be calibrated according to the manufactures instructions at least once every 90 days. The baghouse pressure drop shall be measured and recorded daily by a manometer or magnehelic pressure gauge.

Limitations and Tests Procedures

12. Emissions to the atmosphere from the indicated emission points shall not exceed the specified rates.

Source: Asphalt Plant Stack Emissions

<u>Pollutant</u>	<u>lb/hr</u>	<u>grains/dscf</u> (68 ^o F, 29.92 in Hg)
PM ₁₀ (virgin)	4.64	0.024
PM ₁₀ (RAP) ²	5.41	0.028
SO ₂	3.06	
CO	7.19	
NO _x	35.20	

13. Stack testing to show compliance with the emission limitations stated in Condition 12 shall be preformed as specified below:

A.	<u>Emission Point</u>	<u>Testing Status</u>	<u>Test Frequency</u>
	PM ₁₀ (virgin or RAP)	*	@
	SO ₂	*	@
	CO	*	@
	NO _x	*	@

B. Testing Status (To be applied above)

* Testing was completed on September 5, 2001

@ Test every three years (or sooner if directed by the Executive Secretary). Tests may be required if the source is suspected to be in violation with other conditions of this AO. Compliance testing shall not be required for both virgin and recycle materials during the same testing period. Testing shall be performed for the product being produced during the time of testing.

C. Notification

At least 30 days prior to conducting any emission testing required under any part of UAC, R307, the owner or operator shall notify the Executive Secretary of the date, time and place of such testing and, if determined necessary by the Executive Secretary, the owner or operator shall attend a pretest conference. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Executive Secretary. The source test protocol shall be approved by the Executive Secretary prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Executive Secretary. The pretest conference shall include representation from the owner/operator, the tester, and the Executive Secretary. The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Executive Secretary. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

D. PM₁₀

For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201 or 201a. The back half condensibles shall also be tested using the method specified by the Executive Secretary. All particulate captured shall be considered PM₁₀.

For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate. The back half condensibles shall also be tested using the method specified by the Executive Secretary. The portion of the front half of the catch considered PM_{10} shall be based on information in Appendix B of the fifth addition of AP-42 or other data acceptable to the Executive Secretary.

The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

E. Volumetric Flow Rate

The volumetric flow rates shall be determined in accordance with 40 CFR 60, Appendix A, Method 2.

F. Sulfur Dioxide (SO_2)

40 CFR 60, Appendix A Method 6, 6A, 6B or 6C

G. Nitrogen Oxides (NO_x)

40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D or 7E

H. Carbon Monoxide (CO)

40 CFR 60, Appendix A, Method 10

I. Calculations

To determine mass emissions rates (lb/hr, etc.) The pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

J. New Source Operation

For a new source or emission point, the production rate during all compliance testing shall be determined by the following procedure.

- 1) Testing shall be at no less than 90% of the production rate achieved to date.
- 2) If the test is successful, the new maximum allowable production rate shall be 110% of the successfully tested rate. This new allowable maximum production rate shall remain in effect until successfully tested at a higher rate.

- 3) The Contractor may request a higher production rate. Testing shall be conducted at no less than 90% of the higher rate. If the test is successful, a new maximum production rate equal to 110% of the successfully tested rate will then be allowed. This process may be repeated.

K. Existing Source Operation

For an existing source or emission point, the production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

14. No more than 2,500,000 cubic yards of material per 12-month rolling total shall be blasted for mining. There shall be no more than 60 blast per year. The area to be blasted shall be soaked with water prior to blasting.
15. For drilling of blasting holes, the contractor shall use a wet collar or dry collection equipment to reduce emissions.
16. The use of RAP material shall not exceed 50% of the total hot mix asphalt.
17. Water shall be added to the mined material to be blasted an/or bulldozed such that before the material is moved, its moisture content, as determined by ASTM Method D-2216 on the -40 mesh portion of the sample, is greater than 4.0% by weight. This moisture content shall be maintained throughout subsequent crushing, screening and conveying circuits. The moisture content shall be tested once each day using the appropriate ASTM Method. One sample shall be taken at each of the following locations.
 - A. The pile location where the material that is pushed off the mine bench comes to rest.
 - B. At each of the final product piles.

Samples shall be collected according to Method T-27 specified by the American Association of State Highway & Transportation Officials. Each sample shall be analyzed and recorded separately, such that the moisture content at each point can be determined. If opacity observations of the sources regulated by this moisture content condition indicate visible emissions in excess of 10% opacity, more moisture shall be added until 10% opacity can be achieved. An exceedance of 10% opacity shall not be considered a violation of an opacity standard, but failure to add additional moisture in that case shall be a violation of this condition.

18. Visible emissions from the following emission points shall not exceed the following values:
 - A. All crushers - 15% opacity
 - B. All screens - 10% opacity
 - C. All conveyor transfer points - 10% opacity
 - D. All baghouse stacks - 10% opacity
 - E. All silo exhaust points - 10% opacity
 - F. Material product/Storage piles - 10% opacity
 - G. All diesel engines - 20% opacity
 - H. Conveyor drop points - 20% opacity
 - I. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

For sources that are subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.

19. Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity. Visible emissions determinations for traffic sources shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Six points, distributed along the length of the haul road or in the operational area, shall be chosen by the Executive Secretary or the Executive Secretary's representative. An opacity reading shall be made at each point when a vehicle passes the selected points. Opacity readings shall be made one-half the vehicle length or greater behind the vehicle and at approximately one-half the height of the vehicle or greater. The accumulated six readings shall be averaged for the compliance value.
20. The following operating limits shall not be exceeded:

Aggregate Plant Operation:

- A. 5,000,000 tons of mined material per rolling 12-month period
- B. 4,500 hours of aggregate plant operation per rolling 12-month period
- C. 200,000 tons of petroleum contaminated soil per rolling 12-month period may be processed *

* The average concentration of total petroleum hydrocarbons in the soil shall be less than 10,000 ppm (mg total petroleum hydrocarbon/kilogram soil)

Asphalt Plant Operation:

- D. 1,250,000 tons of asphalt production per rolling 12-month period
- E. 300,000 tons of recycled asphalt pavement (RAP) per rolling 12-month period
- F. 25,000 tons of petroleum contaminated soils used per rolling 12-month period
- G. 3,100 hours of asphalt plant operation per rolling 12-month period

To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by scale house records or vendor receipts. The records of production shall be kept on a daily basis. Supervisor monitoring and maintaining of an operations log shall determine hours of operation.

Roads and Fugitive Dust

21. Staker & Parson Companies shall abide by a fugitive dust control plan acceptable to the Executive Secretary for control of all dust sources associated with the Beck Street North Facility. Staker and Parson Companies shall abide by the most current fugitive dust control plan approved by the Executive Secretary. The haul road speed shall be posted.

22. The facility shall abide by all applicable requirements of R307-309 for PM₁₀ non-attainment areas for Fugitive Emission and Fugitive Dust sources. However, to be in compliance, this facility must operate in accordance with the most current version of R307-309.
23. The haul road shall not exceed two miles and the vehicle speed along the haul road shall not exceed 10 miles per hour. The vehicle's speed limit on haul roads shall be posted at the beginning of the haul road. The posted speed limit shall be large enough to be read by the drivers.
24. The disturbed area shall not exceed 100 acres. Control of disturbed or stripped areas shall be required at all times for the duration of the project/operation per R307-205.
25. Water sprays or chemical dust suppression sprays shall be installed at the following points to control fugitive emissions:
 - A. All crushers
 - B. All screens
 - C. All product piles
 - D. All conveyor transfer points and drop points

Fuels

26. The owner/operator shall use #1 or #2 fuel oil as fuel. The asphalt plant shall operate on natural gas, propane, fuel oil, or on-specification used oil.
27. The sulfur content of any fuel oil or diesel burned shall not exceed:
 - A. 0.50 percent by weight for fuels used in the asphalt plant.
 - B. 0.50 percent by weight for diesel fuels consumed in all other on-site equipment.

The sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of used oil shall be either by Staker & Parson Companies own testing or test reports from the used oil fuel marketer. Certification of other fuels shall be either by Staker & Parson Companies own testing or test reports from the fuel marketer.

28. Staker & Parson Companies shall burn on-specification used oil as fuel. The concentration of contaminants in the fuel oil shall not exceed the following levels:

Arsenic	5 ppm by weight
Cadmium	2 ppm by weight
Chromium	10 ppm by weight
Lead	100 ppm by weight
Total halogens	1,000 ppm by weight
Sulfur	0.5 percent by weight

The flash point of all used oil to be burned shall not be less than 100 °F.

Staker & Parson Companies shall provide test certification for each load of used oil fuel it receives. Certification shall be either by their own testing or test reports from the used oil fuel marketer. Records of used oil fuel consumption and the test reports shall be kept for all periods when the plant is in operation.

Staker & Parson Companies shall record the quantities of oil burned on a daily basis.

Any used-oil fuel that contains more than 1000 ppm by weight of total halogens is a hazardous waste and shall not be burned. The oil shall be tested for halogen content by ASTM Method D-808-81, EPA Method 8240 or Method 8260 before used oil fuel is transferred to the boiler tank and burned.

Staker & Parson Companies shall comply with the State Division of Solid and Hazardous Waste in accordance with R315-15.

Federal Limitations and Requirements

29. In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, New Source Performance Standards (NSPS) Subpart A, 40 CFR 60.1 to 60.18 (General Requirements), Subpart I, 40 CFR 60.90 to 60.93 (Standards of Performance for Hot Mix Asphalt Facilities) and Subpart OOO, 40 CFR 60.670 to 60.676 (Standards of Performance for Nonmetallic Mineral Processing Plants) apply to this installation. To be in compliance, this facility must operate in accordance with the most current version of 40 CFR 60 applicable to this installation/plant/source.

Records & Miscellaneous

30. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this Approval Order including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded.
31. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.
32. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the Division of Air Quality. The Utah Administrative Code R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

http://www.deq.state.ut.us/eqair/aq_home.htm

The annual emission estimations below include point source, fugitive emissions, fugitive dust, road dust and tail pipe emissions. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Controlled Potential To Emit (PTE) emissions for this source (the entire plant) are currently calculated at the following values:

<u>Pollutant</u>	<u>Tons/yr</u>
PM ₁₀	54.22
SO ₂	92.45
NO _x	87.65
CO	93.47
VOC	41.20
HAPs	
Benzene	0.26
Ethyl benzene	0.24
Naphthalene	0.19
Toluene	0.47
Misc. HAPs	3.49
Total HAPs	4.65

Approved By:

Richard W. Sprott, Executive Secretary
Utah Air Quality Board

